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S&T

# The Mentoring Mindset

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# Commentary

## The Mentoring Mindset

**By Donna L. Vogel '71**

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ONE DAY LAST YEAR, I was meeting with a delegation from a foreign research agency. They had recently achieved their goal of funding a target number of postdoctoral fellowships, but were just beginning to face the issues of quality in research training. English was not their first language, and one of them asked me, "What is the difference between a sponsor and a mentor?" Needing to give a concise and instantly comprehensible answer, I replied, "A mentor provides the trainee every opportunity to develop into an independent scientist."

In my first year at the helm of a new office dedicated to fellows at the National Cancer Institute, I have been devoting a lot of thought to those opportunities: what the gaps are, how to raise awareness and how to fill the needs.

### Culture Change Needed

In conversations with postdocs as well as investigators, I am learning that there is a wide spectrum of mentoring attitudes and styles. Many sponsors clearly recognize and act upon their responsibility to grow the next generation of scientists. Some, however, still view trainees largely as a source of labor. And yet others believe that if postdocs are capable, they can make it on their own without any coddling.

The unfortunate result of these latter views is that many talented young people do not meet their full potential — and their ability is lost to science and society. To avoid this outcome, cultural change is needed to make the mentoring mentality part of every supervisor's mindset. Virtually all research supervisors understand their obligation to impart *facts* and *techniques*; our task is to help supervisors understand it is also their obligation to *teach* and provide the *tools* that trainees need to thrive in science careers.

### Mentor-Trainee Dyad

The primary focus of a mentor-trainee dyad is the project itself. The mentor has the breadth of experience to suggest a project and offer judgment as to the project's importance and feasibility. The trainee's responsibility is to carry out the work to her or his best ability, and in accord with ethical and legal standards. With time, the trainee gains ownership of the work, progressing to independence. Ideally, the mentor-trainee relationship grows into one of collegiality, not competition.

Beyond the project itself, I see the expectations between trainees and mentors falling into four categories: visibility, communication, employability and evaluation. Although they overlap to some degree, each category can be framed as an area in which the mentor provides opportunities, constructive criticism and encouragement; and the trainee has the responsibility to seek out and take advantage of those opportunities.

### Four Categories of Expectations

*Visibility* is frequently undervalued by both trainees and mentors, and it is most easily accomplished stepwise, beginning in lab meetings or retreats. Progressing from these generally nonthreatening settings and surrounded by familiar faces, the trainee should begin to submit abstracts to regional and national meetings and request oral presentation when it suits the material. There is no substitute for an audience of one's peers, mentors and potential employers, and professional society meetings are opportunities not to be squandered. These venues also can open doors to collaboration with colleagues who would otherwise be unaware of the work being presented.

The mentor should be aware of opportunities for the trainee to win awards and should support applications from or on behalf of students and fellows. When a site visit is pending from a funding agency, for example, the trainee should be brought into the process of preparation and participation, when appropriate. As the project goes forward, the trainee's growing role will yield increasing recognition, from being acknowledged in the mentor's talk to co-authorship and, eventually, first authorship.

*Communication* takes many forms. Training in oral presentation skills is recommended, and it can start early with presentations to the trainee's immediate group. The ability to create effective slides and posters cannot be taken for granted any more than the ability to give a talk, and visual communication should also be addressed by the mentor-trainee dyad. Writing for publication, teaching and reviewing manuscripts all provide practice in communication and in acquiring the skills needed for an academic career.

In many careers, the trainee also needs to learn how to apply for grants and the whole grant "culture" beyond simply sending in an application. If the mentor lacks experience, a colleague who has had success in funding should join in the mentoring process.

*Employability* covers some of the same territory as visibility and communication, but with a specific focus on the job market. When they come into their learning settings, trainees are relatively naive about career options and pathways. They need to find out what the possibilities are, whether through their own advisers, collaborators, student or fellow associations, and professional societies. While an adviser can and should provide introductions and networking opportunities, the trainee must follow up. Other tools for career building include résumé writing, job searching and interviewing, and supervision and management skills.

*Evaluation* is essential for closing the loop. There is little point to setting expectations without monitoring how well the players are meeting them. Unfortunately, "evaluation" has an image problem: too many of us dread that annual performance review, but the fact is that we cannot get awards, promotions or other types of recognition without documentation of our accomplishments. In addition to regular formal assessment, trainees need and deserve frequent and open informal feedback. An insightful mentor can prevent problems and deal with those that do develop before they reach the point of doing damage.

Finally, mentoring ability — and ultimately mentoring success — should be part of the evaluation of the adviser. This will require a broader view of how we measure "productivity," but I believe we are moving in that direction and research training will be the better for it.

*Donna L. Vogel, director of the Fellowship Office at the National Cancer Institute, works to enhance postdoctoral training experiences in basic, clinical and epidemiological research at NCI. The Fellowship Office provides outreach to recruit new fellows, and supports current fellows with information services, research resources, referrals, career counseling and grant advice.*

*A chemistry major at Bryn Mawr, Vogel earned an M.D. and Ph.D. in developmental biology at the Albert Einstein College of Medicine, Bronx, N.Y. She has conducted and administered clinical and basic research on infertility and reproductive medicine at the National Institute of Child Health and Human Development. Vogel has been active for many years in women's health research.*